

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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In the Matter of:	)	Docket No. 72-22-ISFSI
PRIVATE FUEL STORAGE, LLC	)	ASLBP No. 97-732-02-ISFSI
(Independent Spent Fuel	)	
Storage Installation)	)	August 4, 1999

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**STATE OF UTAH'S REPLY TO NRC STAFF'S RESPONSE IN SUPPORT OF  
APPLICANT'S PARTIAL MOTION FOR SUMMARY DISPOSITION OF  
UTAH CONTENTION K AND CONFEDERATED  
TRIBES CONTENTION B – INADEQUATE  
CONSIDERATION OF CREDIBLE ACCIDENTS**

**INTRODUCTION**

The State of Utah hereby opposes the July 22, 1999, NRC Staff's Response to Applicant's Motion for Partial Summary Disposition of Utah Contention K and Confederated Tribes Contention B ("Staff's Response").<sup>1</sup> On July 22, 1999, the State also filed the State of Utah's Opposition to Applicant's Motion for Partial Summary Disposition of Utah Contention K and Confederated Tribes Contention B ("State's Opposition").<sup>2</sup>

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<sup>1</sup>The Staff has not yet taken a position on the hazards posed by military aircraft, and, thus, in its response, the Staff did not address this issue.

<sup>2</sup>On July 27, 1999, the Board granted the State's motion to defer its response to Applicant's motion for summary disposition with respect to military aircraft until after the Staff has taken a position on military aircraft impacts. See Order Granting Filing Ext. Mo. at 2. Thus, the State's Opposition did not address hazards posed by military aircraft. See State's Opposition at 2.

The Staff adds virtually no new factual information to the assertions made in the Applicant's Motion, but merely recites what the Applicant has already said. As previously demonstrated by the State, the Applicant's assertions are incorrect or inadequate to support summary disposition. Therefore, contrary to the Staff's argument, genuine disputes of material facts exist, and the summary disposition motion should be denied.

### ARGUMENT

#### I. THE STAFF HAS FAILED TO SHOW THE LACK OF A GENUINE DISPUTE REGARDING MATERIAL FACTS.

The Staff endorses the Applicant's Motion for Partial Summary Disposition of Utah Contention K and Confederated Tribes Contention B, dated June 7, 1999 ("Applicant's Motion"), in all respects except for those issues that have been postponed. The Staff's response is inadequate to support the Applicant's Motion, however, because it fails to address relevant issues, ignores disputed facts, or mischaracterizes the facts.

##### A. Dugway Proving Ground

As part of the bases for Utah Contention K, the State asserted that the Applicant failed to adequately assess the hazards from Dugway Proving Ground ("Dugway"), including the hazards associated with "combat training using live munitions and testing of conventional munitions." State of Utah's Contentions on the Construction and Operating License Application by Private Fuel Storage, LLC for an Independent Spent Fuel Storage Facility, dated November 23, 1997, at 74. In its

Opposition, the State showed that live munitions at Dugway are a credible hazard because fired munitions could reach the proposed PFS independent spent fuel storage installation ("ISFSI").<sup>3</sup> State's Opposition at 9. The Staff's Response, however, does not even address the issue.

It appears that with respect to the testing of conventional munitions the Staff relies on its June 15, 1999, NRC Staff's Statement of Its Position Concerning Group I Contentions ("Staff's Position") regarding "explosive testing and storage." See Staff's Response at 10, Ghosh Aff. at ¶ 9, and Staff's Position at 15. In the Staff's Position, the Staff cites a Department of Defense ("DOD") standard that "[f]or the maximum allowed quantity of explosive at one site (500,00 lb) the distances are 3,970 ft to an inhabited building and 2,380 ft to a public traffic route." Staff's Position at 15. The Staff also states that Dugway is approximately 80,000 feet from the proposed ISFSI. *Id.* The Staff then asserts that based on the DOD standard, the 80,000 feet distance between Dugway and the proposed PFS ISFSI "ensures against unacceptable damage and injuries at the PFSF ISFSI in the event of an incident." *Id.*

The Staff relies on many factually incorrect assumptions. First, the Staff "does not dispute the Applicant's Statement of Material Facts" (Staff's Response at 10), that Dugway is approximately 8 miles (or 42,240 feet) from the proposed ISFSI.

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<sup>3</sup>Multiple launch rocket systems are fired at Dugway within a range where a misfired rocket system could reach the proposed PFS ISFSI. See State's Opposition, Matthews Dec. at ¶¶ 10-11.

Applicant's Motion, Statement of Material Facts at ¶ C.1. However, the Staff then contradicts the Applicant's Statement of Material Fact by using a distance of 80,000 feet. Staff Position at 15. Nevertheless, it is immaterial whether Dugway's property line is 80,000 feet or 42,240 feet from the proposed PFS ISFSI because a munition may be found outside of Dugway boundaries, including within 2,380 feet of the ISFSI. Dugway currently conducts testing and training exercises in which munitions could hit the proposed ISFSI or land in the near vicinity, including within 2,380 feet. See State's Opposition at 9. In addition, past Dugway activities create the real potential that buried explosive munitions may be found at or near the proposed ISFSI, including within 2,380 feet.<sup>4</sup> *Id.* at 10-11. Depending upon the stability of the explosive, a munition may not be movable and must be detonated in place, including in the vicinity of the proposed PFS ISFSI. See State's Opposition, Gray Dec. at ¶ 7.

Next, the Staff did not take into consideration that the specific amount of explosives in a munition currently or previously handled by Dugway varies depending upon the munition and any additional detonation charge needed to blow up the munition in place. *Id.* The Staff merely relies on the DOD formula based on the maximum quantity of explosives at any one site (500,000 lbs.) and the DOD safe distance limits. Staff Position at 15. Any comparison to actual munitions tested at

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<sup>4</sup>Between 1942 and 1989, Dugway Proving Ground disposed of munitions, including those containing biological and chemical agent, some of which may not yet have been discovered. See State's Opposition, Gray Dec. at ¶¶ 5-7, 9, and 10.

Dugway, however, is meaningless if munitions are found in the vicinity of the proposed PFS ISFSI from either misfired munitions or past activities and detonated less than the DOD standard safe distance of 2,380 feet. See Staff Position at 15.

Third, the Staff failed to consider the following factors and, as discussed above, all of these factors are necessary to thoroughly assess the hazards posed by munitions associated with Dugway: 1) the probability of a munition actually being in the vicinity of the proposed ISFSI (misfired training munition or previously buried munition); 2) the location of the detonation with respect to the proposed PFS ISFSI; 3) the probability of finding additional contaminants such as biological or chemical agent; 4) the meteorological conditions; and 5) the amount of explosives expected in the munitions and any additional charge needed. See State's Opposition, Gray Dec. at ¶¶ 5 and 7.

Finally, the Staff's Position states that "[a]n offsite accident involving chemical or biological agents does not have a mechanism for initiating a release from the facility or compromising the integrity of the confinement barrier of the storage casks." Staff Position at 16. The Staff misses the point. There is a real possibility that buried chemical or biological munitions may be found outside Dugway property, near the proposed PFS ISFSI. See State's Opposition at 10-11; Gray Dec. at ¶¶ 7-9. The detonation or uncovering of chemical or biological weapons may release agent into the atmosphere. Gray Dec. at ¶ 9. Thus, the integrity of the PFS facility would be

compromised in the event of a chemical or biological agent release, or the need to detonate the buried chemical or biological munition in place in the vicinity of the proposed ISFSI because all PFS employees would be evacuated leaving the spent fuel unsecured.

In summary, the Staff relies on incorrect factual assumptions, misapprehends the factors involved in determining the hazards associated with Dugway Proving Ground, and all in all has failed to show that no genuine material factual dispute exists with respect to the impacts from combat training activities, testing of conventional munitions, buried explosives, or chemical or biological munitions that may be found in the vicinity of the proposed ISFSI.

B. Salt Lake City International Airport

The Staff's expert, Dr. Ghosh, concludes that based on an "evaluation conducted in accordance with NUREG-0800," the "probability of an aircraft crash occurring at the ISFSI site is well below  $10^{-7}$  per year and is, therefore, acceptable." Staff Response, Ghosh Aff. at ¶ 6. It is unclear what evaluation Dr. Ghosh has referenced. If Dr. Ghosh is referring to the analysis attached to the Applicant's Motion, then the assertion is incorrect because the Applicant completely failed to compute the risks of a crash from an aircraft using flight paths J-56 and V257 with NUREG-0800 method or any other method. See Applicant's Motion, Cole Dec., Exhibit 2 at 3-6 (*stating* "the odds of an aircraft falling out of the sky and crashing on

the proposed ISFSI site [are] too small to compute and so highly improbable as to even contemplate"). *See also* State's Opposition, Resnikoff Dec. ¶ 9. In the event that Dr. Ghosh is referring to PFS's Submittal of Commitment Resolution Letter #7 Information ("Supplemental Information"), submitted to the Staff on June 30, 1999, rather than the non-specific analysis included in the SAR, his reliance is inappropriate because the Supplemental Information was not cited in the Applicant's Motion, is not currently before the Board, and was not even submitted to the Staff until after the Applicant's Motion was filed.

Moreover, even if the Staff could rely on the Supplemental Information, the information supplied in that report provides an insufficient basis for dismissal of this portion of Contention K. As the Licensing Board recognized in Consumers Power Co. (Big Rock Point Plant), LBP-84-32, 20 NRC 601 (1984), a proper aircraft hazard analysis "requires consideration of cumulative probability of all aircraft hazards, rather than a separate review of each hazard." 20 NRC at 641. NUREG-0800, on which the Staff relies, also states that the total aircraft hazard probability "equals the sum of the individual probabilities." NUREG-0800 at 3.5.1.6-5. Accordingly, the risks posed by a commercial aircraft crash must be considered in conjunction with the risks of military aircraft crashes at the proposed PFS ISFSI. *See* State Opposition at 4-5. Thus, the hazard posed by commercial aircraft crashes is not ripe for summary disposition.

C. Utah Test and Training Range/Hill Air Force Base

The Staff supports the Applicant's Motion with regard to munitions testing on the Utah Test and Training Range ("UTTR"), asserting the following grounds for concluding that "no significant hazard to the ISFSI exists: 1) targets for air-delivered weapons, including cruise missiles at the UTTR area, are at least 25 miles from the ISFSI, and run-ins for the delivery of these weapons do not cross Skull Valley; 2) a safety review process is conducted prior to testing; 3) the UTTR has never experienced a weapon released outside a designated release area; and 4) Flight Termination Systems are used on all weapon systems having the capability of exceeding range boundaries, to prevent hazards outside of their intended target areas." Staff's Response, Ghosh Aff. at ¶ 5. The Staff offers no facts in support of its conclusory assertions, which merely parrot the assertions in the Applicant's Motion. Moreover, as demonstrated in the State's Opposition and supporting declarations, and as summarized below, the assertions are controverted by the facts.

First, the Staff is incorrect in asserting that the air delivered weapon targets are at least 25 miles away and the run-ins do not cross Skull Valley. Staff Response, Ghosh Aff. at ¶ 5. Air launched weapons' targets are closer than 25 miles. More importantly, during a test, cruise missiles will travel hundreds of miles in the UTTR air space,<sup>5</sup> far

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<sup>5</sup>As indicated in the State's Opposition, the UTTR airspace includes the restricted airspace over the UTTR north and south areas, Dugway, and the Sevier A, B, C, and D military operating areas. This area encompasses the air space directly over the proposed PFS ISFSI. See State's Opposition, Matthews Supp. Dec. at ¶¶ 3 and 7.

beyond a presumed 25 mile distance to a target. *See* State's Opposition at 5-6.

Moreover, a cruise missile will likely change altitudes and fly in every direction, including within a single nautical mile of the proposed PFS ISFSI.<sup>6</sup>

In addition, although run-ins may not cross Skull Valley, military aircraft en route to the UTTR carrying live and inert munitions may overfly the proposed ISFSI. *See* State's Opposition at 8-9. Even though military procedures require armament switches to be turned off, human error and equipment malfunction must be factored into the hazard analysis. *See* State Opposition, Matthews Dec. at ¶ 17. For example, two recent cruise missiles launched in the UTTR airspace crashed as a result of human error and equipment malfunctions. *Id.* at 6-7.

The Staff also errs in asserting that "the UTTR has never experienced a weapon released outside a designated release area." Staff Response, Ghosh Aff. at ¶ 5. In fact, the UTTR has had two cruise missiles crash outside of Department of Defense property. *See* State Opposition at 6; *see also* note 7 below.

Finally, the Staff relies on the Applicant's statement that flight termination systems ("FTS") are used on all weapons that have the capability of exceeding range boundaries. Staff Response, Ghosh Aff. at ¶ 5. However, regardless of whether an FTS was installed, an FTS did not prevent two recent cruise missile crashes, including

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<sup>6</sup>Cruise missile tests will last from 2 to 5 hours and during the test, the missile will travel hundreds of miles traversing the combined UTTR airspace. *See* State's Opposition at 6. *See also*, State Opposition, Matthews Supp. Dec. at ¶¶ 9-10.

one that crashed outside of range boundaries.<sup>7</sup>

In summary, the facts that the Staff relies on are either not accurate or not bounding. Therefore, contrary to the Staff's acceptance of the Applicant's Material Facts, there remain genuine issues of material fact with respect to the hazards posed by UTTR<sup>8</sup> activities.

### CONCLUSION

For the foregoing reasons, the Staff has failed to provide any factual support for the Applicant's Motion. Moreover, the factual assertions by the Applicant, on which the Staff relies, are strongly controverted by factual evidence. Accordingly, Applicant's motion for partial summary disposition should be denied.

DATED this 4<sup>th</sup> day of August, 1999.

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<sup>7</sup> In December 1997 a cruise missile with a working FTS crashed into a civilian observatory trailer on Dugway Proving Ground. See State's Opposition at 6-7. In addition, in June 1999, a cruise missile crashed outside of Department of Defense land boundaries onto public land under the Sevier B MOA. *Id.* at 6, and Matthews Supp. Dec. at ¶ 8. Only limited information has been released about the 1999 crash, and the State has not been able to determine whether an FTS was installed. The accident shows, however, that the Staff cannot be correct in asserting that (a) all weapons that can exceed their range have FTS installed; and (b) that FTS works without fail. Either an FTS was never installed in the missile; or if it was installed, it did not prevent the crash.

<sup>8</sup>The UTTR activities may also emanate out of the Hill Air Force Base. For example, the overflight of military aircraft carrying weapons will likely originate from Hill Air Force Base.

Respectfully submitted,



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CERTIFICATE OF SERVICE

I hereby certify that a copy of STATE OF UTAH'S REPLY TO NRC STAFF'S RESPONSE IN SUPPORT OF APPLICANT'S PARTIAL MOTION FOR SUMMARY DISPOSITION OF UTAH CONTENTION K AND CONFEDERATED TRIBES CONTENTION B – INADEQUATE CONSIDERATION OF CREDIBLE ACCIDENTS was served on the persons listed below by electronic mail (unless otherwise noted) with conforming copies by United States mail first class, this 4th day of August, 1999:

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